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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,438	01/23/2004	Andrew M. Hatch	HSTI 0135 PUS1/H50006AHST	6831
35312 7590 12/31/2007 BROOKS KUSHMAN P.C./ HENKEL CORPORATION 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075-1238			EXAMINER DOUYON, LORNA M	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 12/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/763,438

Applicant(s)

HATCH ET AL.

Examiner

Lorna M. Douyon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16-52 and 64-79 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-52 and 64-79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 15, 2007 has been entered.
2. Claims 1-14, 16-52, 64-79 are pending. Claims 15, 53-63 are cancelled. Claims 75-79 are newly added.
3. The rejection of claim 18 under 35 U.S.C. 112, second paragraph is withdrawn in view of Applicant's amendment.

Claim Objections

4. Claim 64 is objected to because of the following informalities: in line 8, "is" should be added after "composition". Appropriate correction is required.

Claim Rejections - 35 USC § 102/103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-4, 16-17, 19-20, 27-29, 75 and 78 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Neidiffer et al. (US Patent No. 4,959,105), hereinafter "Neidiffer".

Neidiffer teaches, In Example 1, an aluminum clear composition which comprises 92.5 wt% water, 0.7 wt% sulfuric acid (25% by weight in water), 0.07 wt% Surfactant I (which is a commercially available anionic material including a free acid of a complex organic phosphate ester, 0.07 wt% Surfactant II (which is a commercially available nonionic material including block copolymers of propylene oxide and ethylene oxide, 0.03 wt% Surfactant III (which is a commercially available nonionic material including ethoxylates of secondary alcohols containing about 11 to about 15 carbon atoms per molecule, and 0.13 wt% Surfactant IV (which is a commercially available blend of anionic and nonionic surfactants, believed to be linear alkyl sulfates together with ethoxylates of secondary alcohols as noted in Surfactant III (see col. 8, lines 10-59). The compositions of the invention preferably have a pH in the range of about 0.5 to about 3, more preferably about 0.8 to about 2 (see col. 4, lines 5-7). Even though Neidiffer does not explicitly disclose the composition having an average water-break-free percent reduction of less than 50% after 7 days of aging as required in independent

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claim 1, or the exterior of an aluminum can cleaned by the cleaning solution is such that the percent of total surface area of the exterior wall which supports a continuous film of water is greater than 50% as required in independent claim 19, or the cloud point of the composition which is greater than about 125°F as required in independent claim 27, it would be inherent for the composition of Neidiffer to exhibit the recited properties because same ingredients and proportions have been utilized. Hence, Neidiffer anticipates the claims. Even if the teachings of Neidiffer are not sufficient to anticipate the claims, it would have been nonetheless obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect the compositions of Neidiffer to exhibit the recited properties because similar (if not the same) ingredients have been utilized.

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neidiffer as applied to the above claims.

Neidiffer teaches the features as described above. In addition, Neidiffer teaches that the compositions include at least surface active component or surfactant at concentrations in the range of about 0.01% to about 2% by weight of the composition (col. 6, lines 35-36; col. 7, lines 37-45). Neidiffer, however, fails to specifically disclose the proportions of the surfactants in amounts as those recited.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a

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col. 7, lines 7-11). Neidiffer, however, fails to specifically disclose the specific nonionic surfactants as required in the present claims.

Pace, an analogous art for cleaning aluminum metal surfaces (see page 3, lines 19-22), teaches an acidic limescale removal composition which comprises a surfactant or a mixture of surfactants which include nonionic and anionic surfactants (see page 16, lines 11-20). Suitable nonionic surfactants include alkoxylated alcohol nonionic surfactants according to the formula $RO(E)_e(P)_pH$ where R is a hydrocarbon chain of from 2 to 24 carbon atoms, E is ethylene oxide and P is propylene oxide, and e and p represent the average degree of, respectively ethoxylation and propoxylation, are from 0 to 24, the hydrophobic moiety can be primary or secondary, straight or branched alcohol having from 8 to 24 carbon atoms (see page 21, lines 12-28). Suitable anionic surfactants include alkyl sulphate surfactants according to the formula R_1SO_4M wherein R_1 represents a hydrocarbon group which may be straight or branched alkyl radicals containing from 6 to 15 carbon atoms and M may be sodium (see page 2, lines 26-31), wherein sodium 2-ethyl hexyl sulfate is envisaged. The presence of a surfactant in the liquid acidic compositions allows to lower the surface tension and to improve the wettability of the surfaces being treated with the liquid acidic compositions (see page 16, lines 5-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the nonionic surfactants of Pace wherein the nonionic surfactants have an alkyl chain length of 14-24 and an ethoxylation degree of up to 24 into the composition of Neidiffer because Neidiffer specifically desires any

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known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the prima facie case of obviousness. See *In re Boesch*, 627 F.2d 272,276,205 USPQ 215,219 (CCPA 1980). See also *In re Woodruff* 919 F.2d 1575, 1578,16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454,456,105 USPQ 233,235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257,191 USPQ 90 (CCPA 1976; *In re Woodruff*; 919 F.2d 1575,16USPQ2d 1934 (Fed. Cir. 1990). See MFEP 2131.03 and MPEP 2144.051.

9. Claims 21-26, 30-52, 76-77 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neidiffer as applied to the above claims, and further in view of Pace et al. (WO 98/49263), hereinafter "Pace".

Neidiffer teaches the features as described above. In addition, Neidiffer teaches that any suitable surface active component or combinations of such components may be employed such as nonionic and anionic surfactants, examples are those having hydrophobic groups comprising linear alcohols, branched-chain alcohols, secondary alcohols, propylene oxide/propylene glycol condensates and the like, and may further contain capping groups such as propylene oxide (see col. 6, line 51 to col. 7, line 6). Other examples include block copolymers of propylene oxide and ethylene oxide (see

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suitable nonionic surface active component in his composition and Pace teaches such surfactants which also lower the surface tension and improve the wettability of the surfaces being treated.

10. Claims 1-4, 7, 9, 16, 17, 19, 20, 24, 26-29, 33, 35, 75, 78 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bershas et al. (US Patent No. 5,476,601), hereinafter "Bershas".

Bershas teaches a lubricant and surface conditioner forming component in deionized water, comprising of about 1% active organic (I), about 0.2 % inorganic (II) and about 0.5% surfactant (III) (see col. 18, lines 60-67), wherein (I) is oleyl [POE(15)] ammonium chloride, (II) is $\text{Fe}_2(\text{SO}_4)_3$, and (III) is Neodol 25-9 (a C_{12-15} ethoxylated alcohol having 9 moles ethoxylate group) having a pH of 2.0 (see Table 7, cols. 21-22, see Example Type A; second named component). Bershas also teaches that the treatment composition which comprises the lubricant and surface conditioner would generally have a pH that is between about 1 and about 6.5 (see col. 13, lines 3-9). Bershas also teaches that the presence of the lubricant and surface conditioner caused the water to drain more uniformly from the aluminum cans, and the cans remain "water-break" free for a longer time (see col. 17, lines 31-48). Mixtures of one or more surfactants may be employed (see col. 11, lines 58-67). A wide class of anionic, non-ionic, cationic, or amphoteric surfactants are suitable (see col. 12, lines 2-3). Examples include polyethoxylated and/or polypropoxylated derivatives of linear alcohols such as Surfonic™ LF-17 (see col. 12, lines 17-20) and ethylene oxide and propylene oxide

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copolymers (see col. 12, lines 26-29). Bershas, however, fails to specifically disclose a cleaning composition having an average water-break-free percent reduction of less than 50% after 7 days aging as required in claim 1; a cleaning composition such that the percent of total surface area of the exterior wall which supports a continuous film of water is greater than 50% after the aluminum can is cleaned with the cleaning composition as required in claim 3 and independent claim 19, or cloud point of the cleaning composition as required in claims 2, 27, 28; and the pH of the composition as those recited.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect the composition of Bershas to exhibit a water-break-free percent reduction of less than 50% because in col. 17, lines 44-47, Bershas teaches that the aluminum cans remain "water-break" free after treatment with the composition, which "water-break" free of Bershas encompasses the recited value.

With respect to the cloud point of the composition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect said property to be within those recited because similar ingredients have been utilized.

With respect to the pH of the composition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation

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unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

11. Claims 1-4, 7, 9, 16, 17, 19, 20, 24, 26-29, 33, 35, 75, 78 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banaszak et al. (US Patent No. 5,584,943), hereinafter "Banaszak".

Banaszak teaches a lubricant and surface conditioner forming component in deionized water, comprising of about 1% active organic (I), about 0.2 % inorganic (II) and about 0.5% surfactant (III) (see col. 16, lines 15-20), wherein (I) is oleyl [POE(15)] ammonium chloride, (II) is $\text{Fe}_2(\text{SO}_4)_3$, and (III) is Neodol 25-9 (a C_{12-15} ethoxylated alcohol having 9 moles ethoxylate group) having a pH of 2.0 (see Table 5, cols. 17-18, see Example Type A; 9th named component). Banaszak also teaches that the treatment system which comprises the lubricant and surface conditioner would generally have a pH that is between about 1 and about 6.5 (see col. 10, lines 13-19). Banaszak also teaches that the presence of the lubricant and surface conditioner caused the water to drain more uniformly from the aluminum cans, and the cans remain "water-break" free

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for a longer time (see col. 14, lines 32-35). Mixtures of one or more surfactants may be employed (see col. 7, lines 26-28). A wide class of anionic, non-ionic, cationic, or amphoteric surfactants are suitable (see col. 7, lines 33-34). Examples include polyethoxylated and/or polypropoxylated derivatives of linear alcohols such as Surfonic™ LF-17 (see col. 7, lines 47-50) and ethylene oxide and propylene oxide copolymers (see col. 7, lines 56-59). Banaszak, however, fails to specifically disclose a cleaning composition having an average water-break-free percent reduction of less than 50% after 7 days aging as required in claim 1; a cleaning composition such that the percent of total surface area of the exterior wall which supports a continuous film of water is greater than 50% after the aluminum can is cleaned with the cleaning composition as required in claim 3 and independent claim 19, or cloud point of the cleaning composition as required in claims 2, 27, 28; and the pH of the composition as those recited.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect the composition of Banaszak to exhibit a water-break-free percent reduction of less than 50% because in col. 14, lines 32-35, Banaszak teaches that the aluminum cans remain "water-break" free after treatment with the composition, which "water-break" free of Banaszak encompasses the recited value.

With respect to the cloud point of the composition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect said property to be within those recited because similar ingredients have been utilized.

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With respect to the pH of the composition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

12. Claims 1-14 and 16-52, 64-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (US Patent No. 6,214,777), hereinafter "Li".

Li teaches a lubricant composition which is used to treat or lubricate containers (see col. 1, lines 8-10), like aluminum cans (see col. 8, line 66), which comprises neutralizing agents, surfactants, water and water-conditioning agents (see col. 6, lines 41-43). Useful neutralizing agents include the alkali metal hydroxides and are present in an amount to adjust the pH of the composition to a range of about 3 to about 9.5 (see

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col. 6, lines 44-57). Suitable surfactants include nonionic surfactants and anionic surfactants (see col. 6, lines 59-67). Particularly suitable nonionic surfactants are the alkoxyated alcohols having the general formula $R^{10}O((CH_2)_mO)_n$ wherein R^{10} is an aliphatic group having from about 8 to about 24 carbon atoms, m is a whole number from 1 to about 5, and n is a number from 1 to about 40 which represents the average number of ethylene oxide groups on the molecule (see col. 7, lines 18-25), and can be used in an amount of about 0.5 to about 30 percent by weight of the composition (see col. 7, lines 26-30). Other surfactants include sulfates, ethoxylated alkylphenols and polyoxyalkylene oxide block copolymers (see col. 7, lines 1-17). Generally, the total surfactant concentration ranges from about 1 wt% to 50 wt% (see col. 7, lines 50-53). In Example 1, Li teaches a lubricating composition comprising water, 5 wt% didecyl dimethyl ammonium chloride (another surfactant), 2.5 wt% polyethylene phenol ether phosphate, 8 wt% linear alcohol 60-70% ethoxylate and 2 wt% sodium hydroxide 50% (see Example 1 #1 in col. 10, lines 1-16). Li, however, fails to specifically disclose a cleaning composition having an average water-break-free percent reduction of less than 50% after 7 days aging as required in claim 1; a composition wherein the linear alcohol ethoxylate has an alkyl group and ethoxy group as those recited, the water-break-free percent reduction; and cloud point and pH of the composition as those recited.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect the composition of Li to have a similar water-break-free percent reduction as those recited because similar ingredients have been utilized.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range (i.e., alkyl group and ethoxy group of the alcohol ethoxylate) which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

With respect to the water-break-free percent reduction and cloud point of the composition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect said properties to be within those recited because similar ingredients have been utilized.

With respect to the pH of the composition, as the word "about" permits some tolerance (see *In re Ayers*, 69 USPQ 109, and *In re Erickson*, 145 USPQ 207), the lower pH

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limit of about 3 and the upper pH limit of about 9.5 may be considered to read on pH less than 2, or pH 9 or about 11.

13. Claims 19-22, 25-31, 34-41, 44-48, 51-52, 64-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson et al. (US Patent No. 6,328,816), hereinafter "Carlson".

Carlson teaches a cleaning solution for degreasing metal articles, especially aluminum and aluminum alloy metal surfaces (see col. 1, lines 10-12) which comprises water; N-alkyl substituted amides and at least one of (i) amine oxide surfactants, (ii) water soluble nonionic surfactants with molecules containing a polyoxyalkylene block, and (iii) alkali stable anionic, or both anionic and amphoteric, surfactants; and a component of alkalinizing agent like sodium hydroxide or sodium metasilicate (see abstract; col. 2, line 61 to col. 3, line 33; col. 8, line 53 to col. 9, line 11). The working compositions are effective over a wide range of pH values (see col. 5, lines 37-38). For degreasing objects of aluminum alloys intended for manufacture of aerospace vehicles, the pH of the working compositions is at least, with increasing preference to the order given, 9.3, . . . 10.5, . . . 11.0, . . . and not more than 12.0 (see col. 5, lines 53-65).

Examples of nonionic surfactants have the general formula

$R^4-(C_2H_4O)_w-R^5$, where R^4 represents an alkyl, aryl, or alkylaryl moiety preferably having at least 5 carbon atoms and preferably having not more than 22 carbon atoms; R^5 represents hydrogen or an alkyl, aryl, or alkylaryl group having no more than 8 carbon atoms; and w is a number having an average value that is at least 4.0 (see col. 6, line

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56 to col. 7, line 12). Carlson, however, fails to specifically disclose a cleaning composition such that the percent of total surface area of the exterior wall which supports a continuous film of water is greater than 50% when cleaned with the cleaning composition as required in independent claim 19, or cloud point of the cleaning composition as required in claims 27, 28, 37, or the cleaning composition having an average water-break-free percent reduction of less than 50% after 7 days of aging as required in independent claim 64; the number of "R" groups in the nonionic surfactant as those recited; and the pH of the composition as those recited.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect the cleaning composition of Carlson to exhibit similar properties as those recited because similar ingredients have been utilized.

With respect to the cloud point of the composition, and water-break-free percent reduction; it would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect said properties to be within those recited because similar ingredients have been utilized.

With respect to the "R⁴" group in the nonionic surfactant, and pH of the composition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of

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unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

14. Claims 19-52, 64-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cardola et al. (WO 00/12661), hereinafter "Cardola".

Cardola teaches liquid cleaning compositions having a pH of from 7 to 14, suitable for cleaning hard-surfaces including metal surfaces such as aluminum comprise a homo or copolymer of vinylpyrrolidone, a polysaccharide polymer and a nonionic surfactant and no amphoteric surfactant (see abstract; page 3, 4th full paragraph). Suitable nonionic surfactants include the condensation product of aliphatic alcohols having from 2 to 24 carbon atoms, in either straight or branched chain configuration, with from 2 to 35 moles of ethylene oxide (see page 7, 1st full paragraph). The liquid composition may comprise a variety of optional ingredients such as a source of alkalinity and other surfactants other than nonionic or amphoteric surfactants (see page 19, last 8 lines) such as cationic surfactants, anionic surfactants, zwitterionic surfactants, and mixtures thereof (see page 23, last 7 lines). Suitable sources of

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alkalinity include sodium hydroxide and alkali metal oxides (see page 20, line 3+).

Cardola, however, fails to specifically disclose a cleaning composition such that the percent of total surface area of the exterior wall which supports a continuous film of water is greater than 50% after the aluminum can is cleaned with the cleaning composition as required in independent claim 19, or cloud point of the cleaning composition as required in claims 27, 28, 37, or the cleaning composition having an average water-break-free percent reduction of less than 50% after 7 days of aging as required in independent claim 64; the number of alkyl and ethoxy groups in the nonionic surfactant as those recited; and the pH of the composition as those recited.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect the cleaning composition of Cardola to exhibit similar properties as those recited because similar ingredients have been utilized.

With respect to the cloud point of the composition, and water-break-free percent reduction; it would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect said properties to be within those recited because similar ingredients have been utilized.

With respect to the alkyl group and ethoxy group in the nonionic surfactant, and pH of the composition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when

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the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

Response to Arguments

15. Applicants' arguments filed October 15, 2007 have been fully considered but they are not persuasive.

With respect to the rejection based upon Bershas, Applicants argue that the citation cited by the Examiner in Bershas at col. 13, lines 1-20 discloses two distinct routes that the cans may take after being washed, the first route uses a lubricant and surface conditioner with an anionic surfactant wherein the pH is between and 6.5, and the second route includes treatment of the cans with tap water and then deionized water.

While it is true that the disclosure at col. 13, lines 1-20 of Bershas discloses two routes, please note that in col. 12, lines 41-47, Bershas teaches that the lubricant and surface conditioner for aluminum cans may be applied to the cans during their wash

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cycle, during one of their treatment cycles such as cleaning or conversion coating, during one of their water rinse cycles, or more preferably during their final water rinse cycle.

Applicants also argue that the Examiner dismisses the significant limitations on the compositions of independent claims 1, 19, and 27 regarding the water-break-free percent reduction of less than 50% after 7 days of aging, the percent of total surface area of the exterior wall which supports a continuous film of water greater than 50%, or the cloud point of the cleaning composition, respectively.

The Examiner respectfully disagrees with the above arguments because these limitations were discussed in paragraph 10 above.

With respect to the rejection based upon Banaszak, Applicants argue that Banaszak also fails to appreciate the significance of the average water-break-free percent.

The Examiner respectfully disagrees with the above argument because it is clear that Banaszak teaches that the use of the compositions cause the water to drain more uniformly from the cans and the cans remain "water-break" free for a longer time as disclosed in col. 14, lines 32-35.

With respect to the rejection based upon Li, Applicants argue that there is seen no suggestion in Li to choose a particular R1 group in the surfactant portion to form a cleaning solution having the requisite average water-break-free percent or the cloud point of the present invention.

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The Examiner respectfully disagrees with the above argument because it is clear from Li that the alkyl group of the linear alcohol which comprises about 8 to about 24 carbon atoms as disclosed in col. 7, lines 18-25 overlaps those recited, hence when used would have exhibited similar properties as those recited.

With respect to the rejection based upon Carlson, Applicants argue that Carlson fails to appreciate the significance of the supporting of a continuous film of water, or the cloud point.

The Examiner respectfully disagrees with the above argument for the same reasons as in paragraph 13 above.

With respect to the rejection based upon Cardola, Applicants argue that Cardola fails to appreciate the significance of the supporting of a continuous film of water, or the cloud point.

The Examiner respectfully disagrees with the above argument for the same reasons as in paragraph 14 above.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references are considered cumulative to or less material than those discussed above.

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17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lorna M. Douyon whose telephone number is 571-272-1313. The examiner can normally be reached on Mondays-Fridays 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lorna M. Douyon/
Primary Examiner
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